



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0830; Project Identifier AD-2020-00257-R]

RIN 2120-AA64

#### Airworthiness Directives; Bell Textron Canada Limited Helicopters

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for Bell Textron Canada Limited Model 206L-1, 206L-3, and 206L-4 helicopters with certain Air Comm Corporation (Air Comm) air conditioning systems installed. This proposed AD would require visually inspecting the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft for signs of deformation and fretting and depending on the results of the inspection, removing certain parts from service. This proposed AD would also require reinstalling certain parts, applying torque, and aligning certain bolt holes. This proposed AD was prompted by reports of damage to the drive ring spline teeth and the mating spline teeth. The actions of this proposed AD are intended to address an unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: (202) 493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed rule, contact Air Comm Corporation, 1575 Westminster, CO 80234; telephone (303) 440-4075; or at <https://www.aircommcorp.com>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0830; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any referenced service information, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Matthew Bryant, Aerospace Engineer, Denver ACO Branch, FAA, 26805 East 68th Avenue, Denver, Co 80249; telephone (303) 342-1080; email [9-Denver-Aircraft-Cert@faa.gov](mailto:9-Denver-Aircraft-Cert@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0830; Project Identifier AD-2020-00257-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Matthew Bryant, Aerospace Engineer, Denver ACO Branch, FAA, 26805 East 68th Avenue, Denver, CO 80249; telephone (303) 342-1080; email 9-Denver-Aircraft-Cert@faa.gov. Any

commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

The FAA issued Special Airworthiness Information Bulletin SW-19-05 on April 4, 2019 (SAIB SW-19-05) to alert owners and operators of Bell Textron Canada Limited Model 206L-1, 206L-3, and 206L-4 helicopters with Air Comm's Supplemental Type Certificate (STC) SH2750NM installed. SAIB SW-19-05 was prompted by reports of the air conditioner pulley's locking system, which is installed on the oil cooler drive shaft's splined quill, causing excessive spline tooth wear to the drive ring spline teeth and the mating spline teeth on the oil cooler blower shaft. SAIB SW-19-05 recommends following the inspection instructions of certain Air Comm service information and routinely inspecting the air conditioner pulley lock ring.

At the time SAIB SW-19-05 was issued, the airworthiness concern was not determined to be an unsafe condition that would warrant AD action under 14 CFR part 39. However, subsequent investigations were not able to determine whether the limited damaged observed on several oil cooler blower shafts would remain localized or progress to a point where the shaft is no longer safe for continued use. The FAA also later determined that operators may have difficulty aligning the air conditioning system's drive ring holes with the air conditioning condenser drive pulley without leaving the condenser drive pulley under-torqued. Accordingly, the FAA proposes to adopt a new AD for certain Bell Textron Canada Limited Model 206L-1 and 206L-3 helicopters with Bell Model 206L1/L3 Service Instruction for Increased Gross Weight Upgrade Kit BHT-206-SI-2052, Revision 1, dated October 14, 2010, installed and Bell Model 206L-4 helicopters equipped with one of the following Air Comm STC SH2750NM air conditioning systems part number 206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3 or 206EC-212-4.

Helicopters with a 206L-1+ designation are Model 206L-1 helicopters and helicopters with a 206L-3+ designation are Model 206L-3 helicopters.

### **FAA's Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Related Service Information under 1 CFR Part 51**

The FAA reviewed ACC Air Comm Corporation Service Bulletin SB 206EC-091119, Rev B, dated May 26, 2021 (SB 206EC-091119 Rev B), which specifies procedures for visually inspecting the drive ring spline teeth and the mating spline teeth on the tail rotor drive's oil cooler blower shaft for deformation or fretting.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Proposed AD Requirements in this NPRM**

This proposed AD would require, within 300 hours time-in-service (TIS), and thereafter at intervals not to exceed 300 hours TIS, gaining access to the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft, repetitively inspecting the drive ring spline teeth and the mating spline teeth on the tail rotor drive's oil cooler blower shaft for deformation and fretting, and depending on the results of each inspection, removing certain parts from service before further flight. This proposed AD would also require reinstalling certain parts, and if required, reinstalling the drive pulley by torqueing and aligning the drive pulley bolt holes.

### **Differences between this Proposed AD and the Service Bulletin**

SB 206EC-091119 Rev B requires inspecting the air conditioning compressor drive belt tension and the general condition of the drive belt, drive pulley and

surrounding components, whereas this proposed AD would not. SB 206EC-091119 Rev B requires reporting any deformation or fretting to Air Comm Service Department, whereas this proposed AD would not. SB 206EC-091119 Rev B provides an option to deactivate the air conditioning system if deformation of fretting is found on the drive ring or the oil cooler blower shaft assembly, whereas this proposed AD would require removing these parts from service instead.

### **Costs of Compliance**

The FAA estimates that this proposed AD would affect up to 100 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this proposed AD. Labor costs are estimated at \$85 per work-hour.

Removing the tail rotor drive system's forward short shaft, spline adaptor, and drive ring and visually inspecting the drive ring spline teeth and the mating area spline teeth would take about 1 work-hour for an estimated cost of \$85 per helicopter and \$8,500 for the U.S. fleet per inspection cycle.

Replacing the drive ring would take about 3 work-hours and parts would cost about \$300 for an estimated cost of \$555 per replacement.

Replacing the oil cooler blower assembly would take about 3 work-hours and parts would cost about \$2,720 for an estimated cost of \$2,975 per replacement.

Aligning each bolt hole and re-torquing the drive pulley would take about 0.5 work-hours for an estimated cost of \$43 per helicopter.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Would not affect intrastate aviation in Alaska, and
3. Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Bell Textron Canada Limited:** Docket No. FAA-2021-0830; Project Identifier AD-2020-00257-R.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to the Bell Textron Canada Limited helicopters identified in paragraphs (c)(1) and (2) of this AD.

(1) Model 206L-1 and Model 206L-3 helicopters, certificated in any category, with Bell Model 206L1/L3 Service Instruction for Increased Gross Weight Upgrade Kit BHT-206-SI-2052, Revision 1, dated October 14, 2010 (BHT-206-SI-2052), installed and that are equipped with one of the following Air Comm Corporation (Air Comm) Supplemental Type Certificate (STC) SH2750NM air conditioning systems part number (P/N) 206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3, or 206EC-212-4.

Note 1 to paragraph (c)(1) of this AD: Helicopters with a 206L-1+ designation are Model 206L-1 helicopters and helicopters with a 206L-3+ designation are Model 206L-3 helicopters.

(2) Model 206 L-4 helicopters, certificated in any category, and that are equipped with one of the following Air Comm STC SH2750NM air conditioning systems P/N



206EC-204-1, 206EC-204-2, 206EC-208-1, 206EC-208-2, 206EC-210-1, 206EC-210-2, 206EC-210-3, 206EC-212-3, or 206EC-212-4.

**(d) Subject**

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Drive Shaft.

**(e) Unsafe Condition**

This AD was prompted by reports of deformation or fretting of the spline teeth on the air conditioning system and on the oil cooler blower shaft. The FAA is issuing this AD to detect deformation and fretting. The unsafe condition, if not addressed, could result in a failure of the oil cooler blower shaft, which could lead to loss of tail rotor authority and subsequent loss of helicopter control.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Within 300 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 300 hours TIS:

(1) Gain access to the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft by removing the tail rotor drive system's forward short shaft and spline adaptor, and the air conditioner system's drive ring. Refer to Figure 1 of ACC Air Comm Corporation Service Bulletin SB 206EC-091119, Rev B, dated May 26, 2021 for a depiction of each component's location.

(2) Visually inspect the drive ring spline teeth and the mating area spline teeth on the oil cooler blower shaft for deformation and fretting.

(i) If there is deformation or fretting on the drive ring spline teeth, before further flight, remove the drive ring from service and replace it with an airworthy part.

(ii) If there is deformation or fretting on the mating area spline teeth of the oil cooler blower shaft, before further flight, remove the oil cooler blower assembly from service and replace with an airworthy part.

(3) Reinstall the drive ring, spline adapter, and the forward short shaft. If the compressor drive pulley was or removed, torque the drive pulley to 200-300 in-lbs, increasing torque in this range to align the four threaded holes with the through holes in the drive ring. Do not back-off torque to align the bolt holes.

#### **(h) Special Flight Permits**

Special flight permits are prohibited.

#### **(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Denver ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Denver ACO, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-Denver-Aircraft-Cert@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

#### **(j) Related Information**

(1) For more information about this AD, contact Matthew Bryant, Aerospace Engineer, Denver ACO Branch, FAA, 26805 East 68th Avenue, Denver, CO 80249; telephone (303) 342-1092; email 9-Denver-Aircraft-Cert@faa.gov.

(2) For service information identified in this AD, contact Air Comm Corporation, 1575 W 124<sup>th</sup> Ave #210, Westminster, CO 80234; telephone: (303) 440-4075; email [cposvic@aircommcorp.com](mailto:cposvic@aircommcorp.com). You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Issued on September 16, 2021.

Ross Landes, Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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